

FORM PTO-1390
(REV 11-98)

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

ATTORNEY'S DOCKET NUMBER

P56560PCT

TRANSMITTAL LETTER TO THE UNITED STATES
DESIGNATED/ELECTED OFFICE (DO/EO/US)
CONCERNING A FILING UNDER 35 U.S.C. 371

U.S. APPLICATION NO. (if known, see 37CFR 1.5)

09/890440

INTERNATIONAL APPLICATION NO.
PCT/KR00/01346INTERNATIONAL FILING DATE
22 November 2000PRIORITY DATE CLAIMED
9 December 1999TITLE OF INVENTION
DRIVING CIRCUIT OF DC MICROWAVE OVEN AND METHOD OF
CONTROLLING THE SAMEAPPLICANT(S) FOR DO/EO/US Samsung Electronics Co., Ltd. / Yong-Woon HAN, Seong-Deog JANG,
Kwang-Seok KANG, Han-Jun SUNG

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. ☒ This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371.
2. ☐ This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371.
3. ☐ This express request to begin national examination procedures (35 U.S.C. 371(f)) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 29(1).
4. ☐ A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date.
5. ☒ A copy of the International Application as filed (35 U.S.C. 371(c)(2))
 - a. ☐ is transmitted herewith (required only if not transmitted by the International Bureau).
 - b. ☒ has been transmitted by the International Bureau.
 - c. ☐ is not required, as the application was filed in the United States Receiving Office (RO/US).
6. ☐ A translation of the International Application into English (35 U.S.C. 371(c)(2)).
7. ☒ Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))
 - a. ☐ are transmitted herewith (required only if not transmitted by the International Bureau).
 - b. ☒ have been transmitted by the International Bureau.
 - c. ☐ have not been made; however, the time limit for making such amendments has NOT expired.
 - d. ☐ have not been made and will not be made.
8. ☐ A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).
9. ☒ An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(3)).
10. ☐ A translation of the annexes to the International Preliminary Examination Report under PCT Article 36. (35 U.S.C. 371(c)(5))

Items 11. to 16. below concern document(s) or information included:

11. ☐ An Information Disclosure Statement under 37 CFR 1.97 and 7.98.
12. ☒ An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
13. ☐ A **FIRST** preliminary amendment.
☐ A **SECOND** or **SUBSEQUENT** preliminary amendment.
14. ☐ A substitute specification.
15. ☐ A change of power of attorney and/or address letter.
16. ☒ Other items or information:

- International Search Report (PCT/ISA/210);
 - WO 01/49079 A1
 - PTO-1449
 - Amendment under PCT Article 19 filed on 25 May 2001

U.S. APPLICATION NO. (if known, see 37CFR 1.5) 09/890440		INTERNATIONAL APPLICATION NO. PCT/KR00/01346		ATTORNEY'S DOCKET NUMBER P56560PCT	
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17. <input checked="" type="checkbox"/> The following fees are submitted: BASIC NATIONAL FEE (37 CFR 1.492(a) (a)-(5)): Neither international preliminary examination fee (37CFR 1.782) nor international search fee (37CFR 1.445(a)(2)) paid to USPTO and International Search Report not prepared by the EPO or JPO \$1,000.00 International preliminary examination fee (37 CFR 1.482) not paid to USPTO but International Search Report prepared by the EPO or JPO..... \$860.00 International preliminary examination fee (37 CFR 1.482) not paid to USPTO but international search fee (37 CFR 1.445(a)(2)) paid to USPTO..... \$710.00 International preliminary examination fee paid to USPTO (37 CFR 1.482) but all claims did not satisfy provisions of PCT Article 33(1)-(4)..... \$690.00 International preliminary examination fee paid to USPTO (37 CFR 1.482) and all claims satisfied provisions of PCT Articles 33(1)-(4)..... \$100.00 ENTER APPROPRIATE BASIC FEE AMOUNT =				CALCULATIONS PTO USE ONLY	

Surcharge of \$130.00 for furnishing the oath or declaration later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(e)).				\$	
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CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE		
Total claims	25 -20 =	5	X \$18.00	\$ 90.00	
Independent claims	5 -3 =	2	X \$80.00	\$ 160.00	
MULTIPLE DEPENDENT CLAIMS(S) (if applicable)			X \$270.00	\$	
TOTAL OF ABOVE CALCULATIONS =				\$ 1,250.00	
Reduction of 1/2 for filing by small entity, if applicable. A Small Entity Statement must also be filed (Note 37 CFR 1.9, 1.27, 1.28)				\$	
SUBTOTAL =				\$ 1,250.00	
Processing fee of \$130.00 for furnishing the English translation later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(f))				\$	
TOTAL NATIONAL FEE =				\$ 1,250.00	
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property				\$ 40.00	
TOTAL FEE ENCLOSED =				\$ 1,290.00	
				Amount to be refunded	\$
				charged	\$

a. ☒ A check in the amount of \$ 1,290.00 to cover the above fees is enclosed.
(Checks: #40024 for \$1,250.00 and #40025 for \$40.00)

b. ☐ Please charge my Deposit Account No. _____ in the amount of \$ _____ to cover the above fees.
A duplicate copy of this sheet is enclosed.

c. ☒ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. **02-4943**. A duplicate copy of this sheet is enclosed.

NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.

SEND ALL CORRESPONDENCE TO:

Robert E. Bushnell
ROBERT E. BUSHNELL & LAW FIRM
1522 K Street, N.W.,
Suite 300
Washington, D.C. 20005-1202
Tel: (202) 408-9040
Fax: (202) 289-7100

DATE 8/1/2001

SIGNATURE *Robert E. Bushnell*

NAME Robert E. Bushnell

REGISTRATION NUMBER 27,774

DRIVING CIRCUIT OF DC MICROWAVE OVEN AND METHOD OF CONTROLLING THE SAME

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to a driving circuit of a DC microwave oven and a method of controlling the same, and more particularly to a driving circuit of a DC microwave oven and a method of controlling the same for driving a magnetron through a conversion of a DC voltage into an AC voltage.

2. Description of the Prior Art

A general AC microwave oven is adapted to drive a magnetron thereof for generating a microwave through an application of commercial AC voltages of 110~230V.

In the meantime, A DC microwave oven has been developed which may be used in regions outside a town or in transportation of various kinds such as vehicles, ships, airplanes, and the like to which the commercial AC voltages are hardly supplied.

In general, the DC microwave oven drives a magnetron thereof by converting a DC voltage outputted from a battery of a DC voltage supply into an AC voltage through an inverter.

The DC microwave oven employing a general DC battery of 12V or 24V requires large currents of 30A~100A in order to drive the magnetron thereof. Accordingly, switches, that is, a primary interlock switch operated in association with the openings and closings of the door of the microwave oven and a secondary interlock switch operated in response to the